AIR RAID PRECAUTION APPLIANCES

ROBERTS, McLEAN & CO. LTD. (INC. IN INDIA)

Anti-Gas and Fire Protection Engineers

CORONATION HOUSE

4, LLOYDS AVENUE, LONDON, E.C.3

Telephone : ROYAL 4186

COPYRIGHT

Realising that future hostilities will involve both old and young, and desirous of assisting in every possible way, we have made a thorough study of the science of passive defence, i.e. Air Raid Precautions.

Research has taken us to other Countries who, owing to their geographical position have been forced to adopt every practical measure for the protection of their civilian population against Fire and Toxic Gas.

To-day we stand in the foremost position of being able to offer for the defence of the civilian population of this country up to date appliances.

Evidence of our status on the European Continent has taken the form of the award of the Silver Medal and Diploma of the French National Bureau of Scientific Research ; the first granted to any British Firm of Fire Engineers. In India, where we have had 25 years' experience, we have been appointed Fire Engineers to H.E. the Marquess of Linlithgow, Viceroy and Governor-General of India.

All our appliances are for the protection and preservation of life against Fire and Poison Gas.

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INTRODUCTION

WITHIN the last twenty years, people have become gas-conscious. Time was when a wet handkerchief or piece of cloth over the nose and mouth was considered sufficient protection for firemen when meeting the toxic gases to be found at every outbreak of fire. That such primitive protection saved their lives was due to the concentration of the gases being too low to kill.

The War did most, probably, to make people gas-conscious, and since its end in 1918, industry has done much to educate the masses in the need to protect themselves against the gases associated with various commercial processes from cellulose spraying down to the storage of petrol and dangerous chemicals.

Political developments of late have further increased this gas-consciousness and have focussed attention on the use of gas in a military sense with the view to the imposing of one nation's will on the other; the gas dissemination being by means of aircraft. As a leading politician said early last year, "the Bomber will always get through," and the best concentration of defence forces will not be able to prevent some hostile aircraft penetrating our defences and dropping gas bombs of all types, as well as high explosive and incendiary shells.

That Bombers will get through and discharge their cargoes on big cities is fairly certain, and all that can be done is to find protection for both armed and civilian peoples. That such protection is available should be known without delay, and, moreover, it must be protection against all known gases that will be met with in War.

It is interesting to note that, while much is known of most Chemical Warfare methods, very little is known about this new method, *viz.*, Gas. Few are aware of the appearance, odours, symptoms of infection and contamination of the several military gases, and fewer know anything of protection against them. Some comfort themselves with "it may never happen," while others become resigned to possible fate.

Maintaining the "morale" of a people during the early days of the next War is all important and will mean the winning of the conflict, and it should be stated, at once, that knowledge of gases and their effects will enable the average citizen to withstand the early shocks of raids and thus avoid the panic that would spell demoralisation. In addition, there is the personal factor of self-preservation.

Much has been written, mostly by imaginative journalists, about the all-destroying power of gas. But gas has its limitations, and the American "Dew of Death," often described as the worst of poison gases, is no exception to the rule. No one gas affects all the human organs or functions in the same way or to the same extent. One gas will irritate the eyes, another the nose and throat, and a third will attack the lungs, while a fourth has the skin for its objective. But it is possible adequately to protect every threatened organ or function provided one understands the nature and effect of the gas in question.

It is the knowledge of the gases likely to be used, their effects and characteristics that will enable the citizen to protect himself, and, this vitally important knowledge will remove the basic cause of panic which is the first condition the enemy will seek to produce among the nation.

The principal effects and characteristics of these gases should be learned either by reading or, better still, by demonstration which, by the way, can be undertaken without risk of personal danger. Let us enumerate them :—

The principal substances used in Chemical warfare will be :—

EYE-irritants	K.S.K.	Ethyl-iodoacetate.
	B.B.C.	Bromobenzyl-cyanide.
	C.A.P.	Chloroacetophenone.
NOSE & THROAT irritants.	D.C.	Diphenylarsin-cyanide.
	D.M.	Phenarsazin-chloride.
	D.A.	Diphenylarsin-chloride.
LUNG poisons.		Phosgene.
		Di-phosgene.
	P.S.	Chloropicrin.
		Chlorine.
SKIN blisters.		Dichlorodiethyl-sulphide (Mustard Gas).
		Dichlorodivinyl-arsinchloride (Lewisite).

This classification, which is based on organ and function effect, affords a general idea of the range and limitation of the several gases likely to be used. There is, however, some small overlapping in that Chloroacetophenone, which is an eye-irritant, will also attack the skin, but to a lesser degree, while Diphenylarsin-cyanide, which is

mainly an irritant of nose and throat, will affect eyes and skin, too. But, it should be clearly laid down, that in each and every case, complete protection may be secured.

We have enumerated the principal substances, some of which, however, are known by other names in other countries. But their main characteristics do not differ. German practice identifies under coloured crosses—Green Cross for Lung poisons; Blue Cross for Nose and Throat irritants, and Yellow Cross for Skin blisters. In a similar way in France, Mustard Gas is known as "Yperite," and this also applies to Belgium. In Germany it is known as "Lost." Nose irritants or arsenical smokes are known elsewhere by other names; for instance, Diphenylarsin-chloride is known as "Clark I," and Phenarsazin-chloride as "Adamsit."

Rapid and accurate identification by everybody of the important characteristics of these substances is essential so that in an emergency their chief external properties, colour, condition—whether gaseous, liquid or solid—viscosity, smell and physiological effects can be decided. If necessary, one should be able to obtain corroborative evidence by means of simple chemical tests.

The requisite knowledge can easily be obtained by means of small sealed glass phials containing minute quantities of the actual poisonous substances. These phials, which are carried in small and handy cases, contain very weak concentrations of the substances used in chemical warfare, but of sufficient intensity to enable the characteristic odour to be identified.

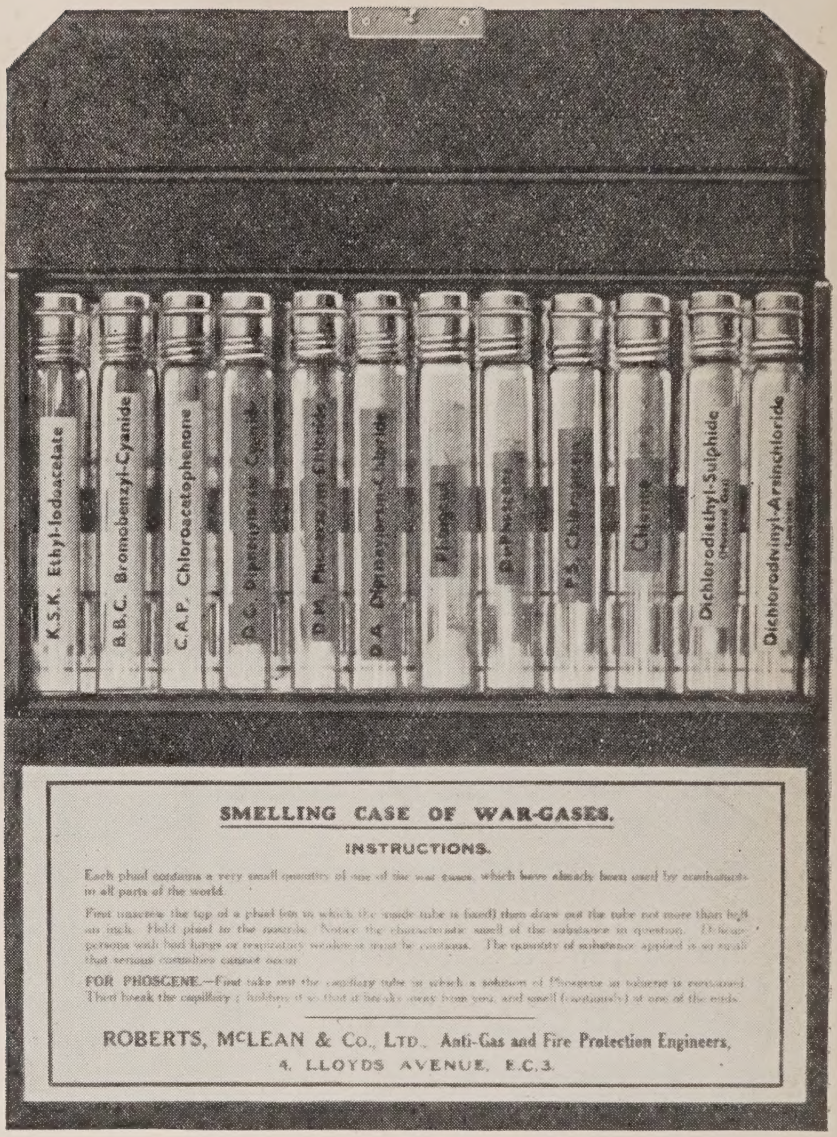
Solid substances can be more conveniently demonstrated by means of smouldering papers or capsules which smoulder and give off a distinctive odour. This also makes physiological effects apparent.

As will be seen from a glance at a case of specimen poisonous substances in their phials the term "Poison Gases" is a misnomer, for among all the substances used in chemical warfare, only "Phosgene" is a gas at ordinary temperature. It is therefore more correct to describe these agents as "Chemical Warfare substances."

We have made a considerable study of the question, and have been able to secure all the necessary data, etc., so as to make these experiments and demonstrations as simple and effective as possible.

The necessary equipment consists of the following:—

Smelling Cases of War Gases



The Smelling Case contains phials in which a small glass tube, open at the lower end, is fixed to the stopper. This small tube is filled with glass wool which is impregnated with a very small quantity of the actual substance in question. To test the smell, the screw top of the phial is loosened and the inner tube withdrawn a little.

Only those liquid substances which have a characteristic odour can be demonstrated by means of these smelling cases. Phosgene, which is a gas at ordinary temperature, can also be demonstrated in a similar manner by the use of a tube in which there are 15 small capillary tubes, in each of which there is a minute quantity of a solution of Phosgene in an organic solvent. On breaking one of these capillary tubes the odour of Phosgene is plainly perceptible.

WHITE CROSS (Eye Irritants).

K.S.K. Ethyl-Iodoacetate.
B.B.C. Bromobenzyl-Cyanide.
C.A.P. Chloroacetophenone.

BLUE CROSS (Nose and Throat Irritants).

D.C. Diphenylarsin-Cyanide.
D.M. Phenarsazin-Chloride.
D.A. Diphenylarsin-Chloride.

GREEN CROSS (Lung Poisons).

Phosgene.
Di-Phosgene.
P.S. Chloropicrin.
Chlorine.

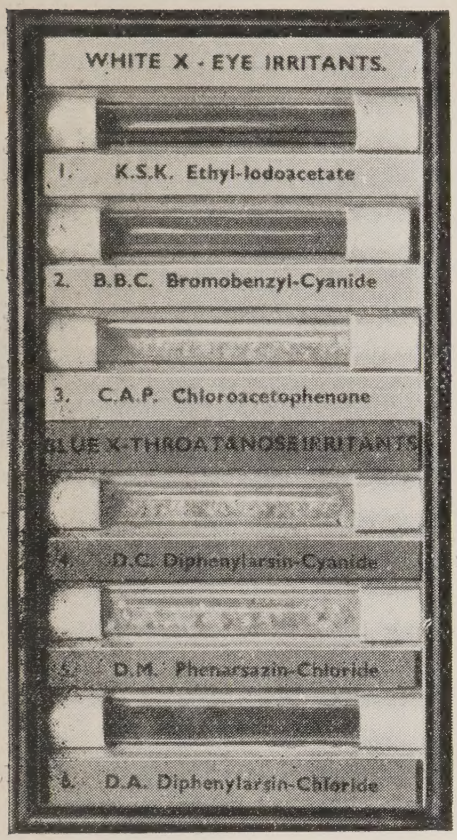
YELLOW CROSS (Skin Blisters).

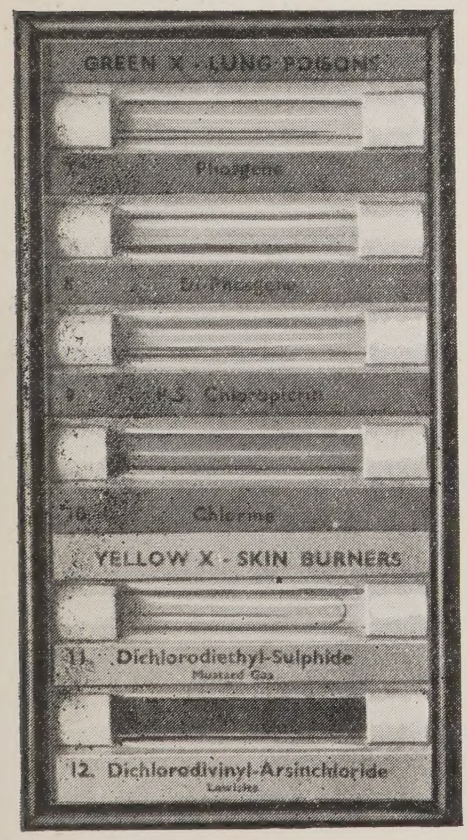
Dichlorodiethyl-Sulphide (Mustard Gas).
Dichlorodivinyl-Arsinchloride (Lewisite).

Price £1/15/0 per set.

Visual Cases of War Gases

(NON-DANGEROUS)





These exhibition cases, with transparent non-inflammable unbreakable covers of Cellon, contain 12 of the most important irritants and gas attack material in containers with labels and an indication of the colour group to which they belong.

WHITE CROSS (Eye Irritants).

K.S.K. Ethyl-Iodoacetate.
B.B.C. Bromobenzyl-Cyanide.
C.A.P. Chloroacetophenone.

BLUE CROSS (Throat and Nose Irritants).

D.C. Diphenylarsin-Cyanide.
D.M. Phenarsazin-Chloride.
D.A. Diphenylarsin-Chloride.

GREEN CROSS (Lung Poisons).

Phosgene.
Di-Phosgene.
P.S. Chloropicrin.
Chlorine.

YELLOW CROSS (Skin Blisters).

Dichlorodiethyl-Sulphide
(Mustard Gas).
Dichlorodivinyl-Arsinchloride
(Lewisite).

Short descriptions on the back of each case.

Price ... £1/5/0 per set of 2 cases.

SMOULDERING PAPERS.

Solid substances are best demonstrated by means of SMOULDERING PAPERS, and as the method of demonstrating is the same in each case, it is only necessary to describe one: *i.e.* C.A.P. (Chloroacetophenone). The box contains 15 strips of filter paper, which are impregnated with Chloroacetophenone (Tube No. 3 in visual case). The characteristic smell and the white crystals of this most important tear gas substance can be distinguished by the paper itself. After lighting with a match, the paper slowly smoulders, and a white smoke is given off, which contains Chloroacetophenone. This gas has a strong burning effect on the nose and mouth, as well as the skin, and irritates the eyes so that tears flow freely. Chloroacetophenone is used in modern gas warfare, in the form of toxic smoke candles, grenades and hand-grenades. In certain countries the police make use of this gas contained in cartridges and hand-grenades for subduing criminals and quelling riots. A similar method is employed in demonstrating the smell and effects of:—

No. 4 D.C. Diphenylarsin-Cyanide.
No. 5 D.M. Phenarsazin-Chloride.
No. 6 D.A. Diphenylarsin-Chloride.

No. 3 C.A.P.	Chloroacetophenone	... **Price**	**2/6**	per box
No. 4 D.C.	Diphenylarsin-Cyanide	... ,,	**2/6**	,,
No. 5 D.M.	Phenarsazin-Chloride	... ,,	**2/6**	,,
No. 6 D.A.	Diphenylarsin-Chloride	... ,,	**2/6**	,,

Each box contains 15 strips of filtering paper.

SMOULDERING CAPSULES.

These Capsules contain larger quantities of the same substances and are used for filling Gas Chambers, also for testing Gas Masks and containers (filters) or for demonstrations in the open.

Each Capsule contains a sufficient quantity of the Gas to fill a room 15′ square. To use, insert one fusee match, head downwards, in centre disc which will be found on opening the lid, and ignite the wooden end.

Supplied as follows:—

No. 3 C.A.P.	Chloroacetophenone	... ...	**1/3**	each
No. 4 D.C.	Diphenylarsin-Cyanide	... ...	**2/-**	,,
No. 5 D.M.	Phenarsazin-Chloride	... ...	**1/6**	,,
No. 6 D.A.	Diphenylarsin-Chloride	... ...	**1/6**	,,

COLOURED CHART.

Showing where War Gases attack the human body. **Price 3/6** each

COLOURED INSTRUCTIONAL CHARTS.

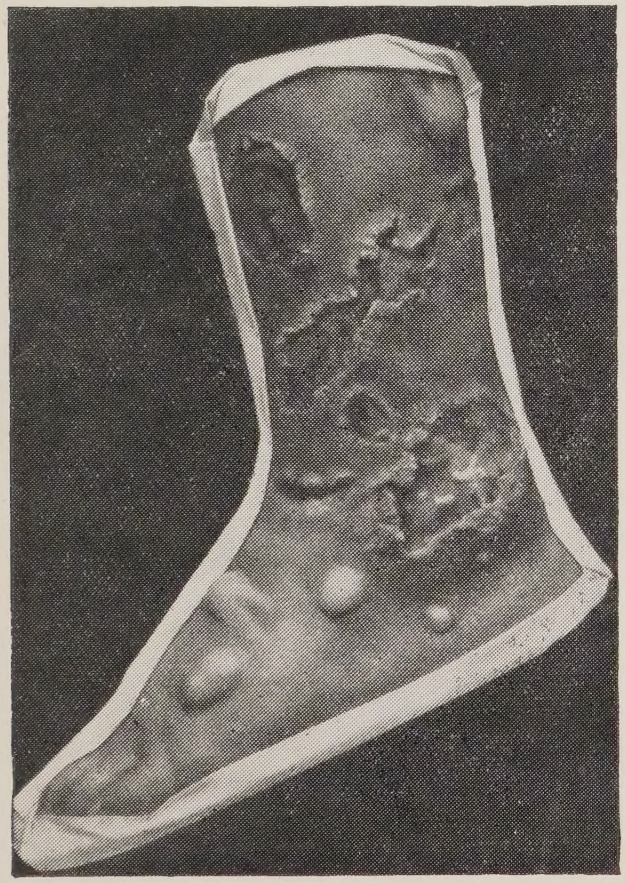
1. Decontamination of Provisions after exposure to War Gases.
2. Protection and First Aid Treatment for Nose and Throat Irritants and Phosphorus burns.
3. Poisoning by Lung Irritants and First Aid Treatment.
4. Illustrating and describing effects of Blister Gases.
5. First Aid Treatment for Blister Gas cases.

Mounted on Cardboard ... ... **Price 25/-** per set of 5 Charts.
If sold separately ... ... **6/-** each.

LECTURE CHARTS.—See page 38.

REALISTIC REPRODUCTIONS OF LIMBS.

Showing the effects of Blister Gases. We supply a series of four life-size models as follows :—



No. 1. Hand.
Blister resulting from one small spot of liquid Mustard Gas.
Price ... £2/10/0 each.

No. 2. Forearm.
Appearance of Mustard Gas Blisters just before bursting—2 to 3 days after contamination.
Price ... £2/10/0 each.

No. 3. Foot.
Appearance of Mustard Gas Blisters, some of which have burst—3 to 5 days after contamination.
Price ... £2/19/6 each.

No. 4. Forearm.
Appearance of Mustard Gas Burn which has suppurated owing to further infection.
Price ... £2/19/6 each.

High Explosive, Incendiary, Smoke and Gas Bombs for instructional purposes

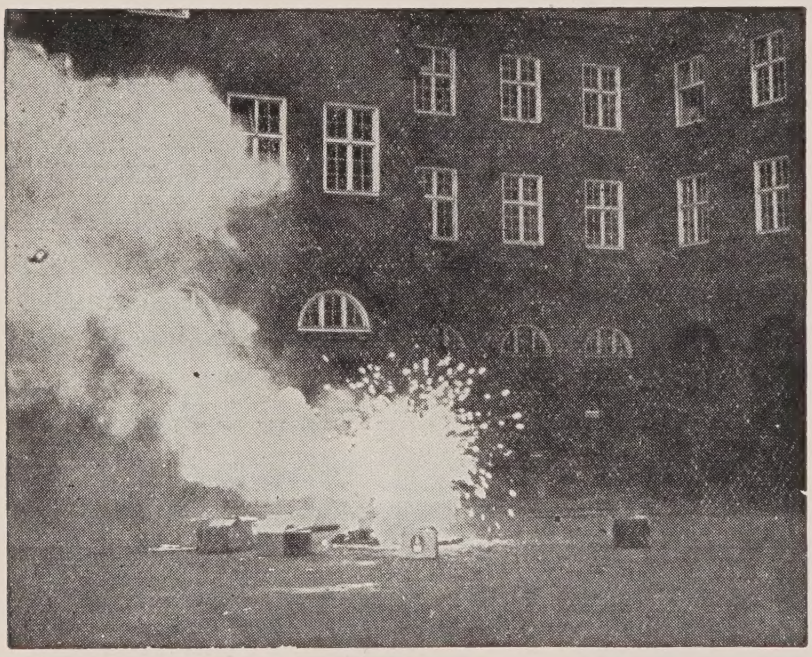
EXPLOSIVE BOMBS.

These bombs imitate the sound and " percussion " effect of a high explosive shell and are usually employed to begin a demonstration. Follow instructions printed on the bomb.

Price ... **2/-** each.

ELECTRON.

Experts are of opinion that this type of bomb, which ranges in size from 1 kilo (1,000 gr.) to 50 or 60 lbs. is to be feared even more than a " Gas Bomb."



An aeroplane can carry upwards of 1,000 of the kilo size, each of which is capable of causing numerous fires, and will penetrate all forms of light roofs such as slates, tiles, corrugated iron, fibrous cement sheeting, etc.

These practice bombs are supplied in the following sizes :—

Grams.		**Price.**
250	...	**4/3** each.
500	...	**8/-** ,,
1000	...	**12/-** ,,

ELECTRON SPRAYING CANDLE.

Can also be used for igniting Electron Filings.

Price 2/- each.

ELECTRON METAL FILINGS.

For fire demonstration purposes. ... ... **Price 1/-** per lb.

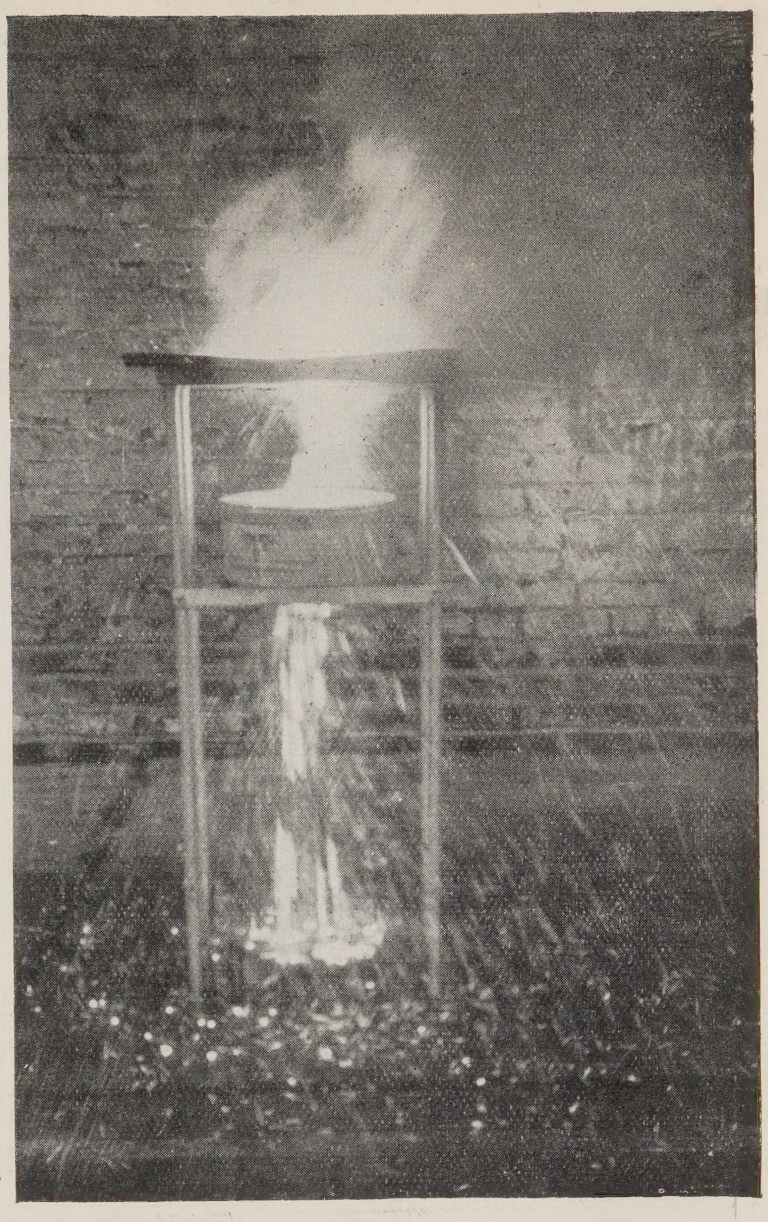
THERMITE.

To demonstrate the terrific heat generated by this substance with which every incendiary bomb is filled, we supply three sizes of experimental bombs.

The bomb is placed on a sheet of 8 gauge mild steel sheet supported by bricks about 2′ high. Immediately below the bomb a tin filled with water is placed, supported by two iron bars, and below this again is a heap of dry sand. This piece of apparatus is easily erected. Light the bomb in accordance with the instructions on the container and it will be seen that the molten metal burns right through the steel; also the water in the receptacle below and finally burns itself out in the sand.

These bombs are supplied in the following sizes :—

250 Grams. **Price 3/3** each
500 ,, ,, **5/-** ,,
1000 ,, ,, **8/-** ,,



INCENDIARY PHOSPHORUS SET.

This contains 25 gr. of yellow phosphorus and is useful for fire drill. Light celluloid strip as instructed and use damp sand.

Size : 25 grams.... ... ... **Price** ... **3/6** each.

GAS BOMBS (IMITATION).

WHITE. GREEN.
BLUE.

These represent poisonous gases which attack the human body, *i.e.* :—

EYES.
NOSE AND THROAT.
LUNGS.

When considering present day war gases, it must be stated at the outset that with few exceptions they are not actually gases, but liquids or solids.

The gases may roughly be divided into three classes, according to their particular action on the various organs of the body, *i.e.* :—

EYE IRRITANTS (WHITE).
THROAT & NOSE IRRITANTS (BLUE).
LUNG POISONS (GREEN).

This classification does not, of course, mean a sharp distinction because there are lung poisons which at the same time act as strong eye irritants, also nose and throat irritants.

BLISTER GAS SPRAYING BOMBS (IMITATION).

For instruction of Air Raid Wardens and Decontamination Squads. Fill the bomb with imitation substance and light fusee. Gross contamination occurs where the bomb is placed, decreasing in intensity as the oil is spread over a wider area.

Spraying Bomb ... ... **Price 2/-** each.

Imitation substances with which the bomb may be filled are :—

Mustard Gas ... ... **Price 2/-** per tin.
Lewisite ... ... ,, **2/-** ,,

SMOKE CLOUDS.

These were used in the late war to camouflage battery and tank positions, and are now being used for camouflaging Gasholders, Docks, Railways, Factories, Power Stations, Arsenals, Aerodromes, Oil Depots, and important Government Buildings. Smoke clouds will be useful in making it more difficult for an enemy to recognise his objective. An effective smoke screen must be nine times the size of the objective.

Smoke clouds can be had in the following colours :—

Yellow	... **Price 2/-** each.	**Red** ...	... **Price 5/-** each.
Black	... ,, **2/-** ,,	**Blue**...	... ,, **5/-** ,,
White	... ,, **2/-** ,,	**Green**	... ,, **5/-** ,,

Prices for larger sizes on applicatlon.

DETECTOR PAPER.

Boxes containing 15 strips of paper which turn red on contact with Mustard Gas or violet in the case of Lewisite.

Price ... **2/6** per box containing 15 strips.

SIGNAL AERIAL MAROON ... ... **10/6 each**

IRON MORTAR FOR FIXING ABOVE ... **18/6** ,,

COLOURED LIGHTS.

	¼ lb.	½ lb.	1 lb.	
Red	**1/-**	**1/9**	**3/6**	per tin
Blue	**1/-**	**1/9**	**3/6**	,,
Green	**1/-**	**1/9**	**3/6**	,,

C.F.S. Patent Full-Sight Gas Mask

The C.F.S. Patent Full-Sight Gas Mask has been supplied to over 200 Fire Brigades and important Industrial Concerns throughout the Country

Patent Nos.:
348261 (14/5/31);
433848 (21/8/35);
429824 (6/6/35).

THE IDEAL GAS MASK FOR FIRE AND AMBULANCE BRIGADES, CHEMICAL AND OTHER INDUSTRIES, CIVIL USE, ETC.

Advantages.—Full vision.

The wearer's features easily recognisable.

Extremely light in weight and comfortable to wear.

Can be put on with one hand and easily adjusted.

Special case provided, in which the mask can be stored indefinitely, without distortion, disfiguration or loss of efficiency.

Is non-inflammable and impervious to mustard gas and caustic materials.

Protects the wearer's face against accidental blows.

No dimming of vision, even after long wear.

Absorbent canister can be changed in a moment.

Full protection against mustard and other gases for long periods.

This type of mask permits conversation while the mask is worn.

S.F.A. Grey Filter

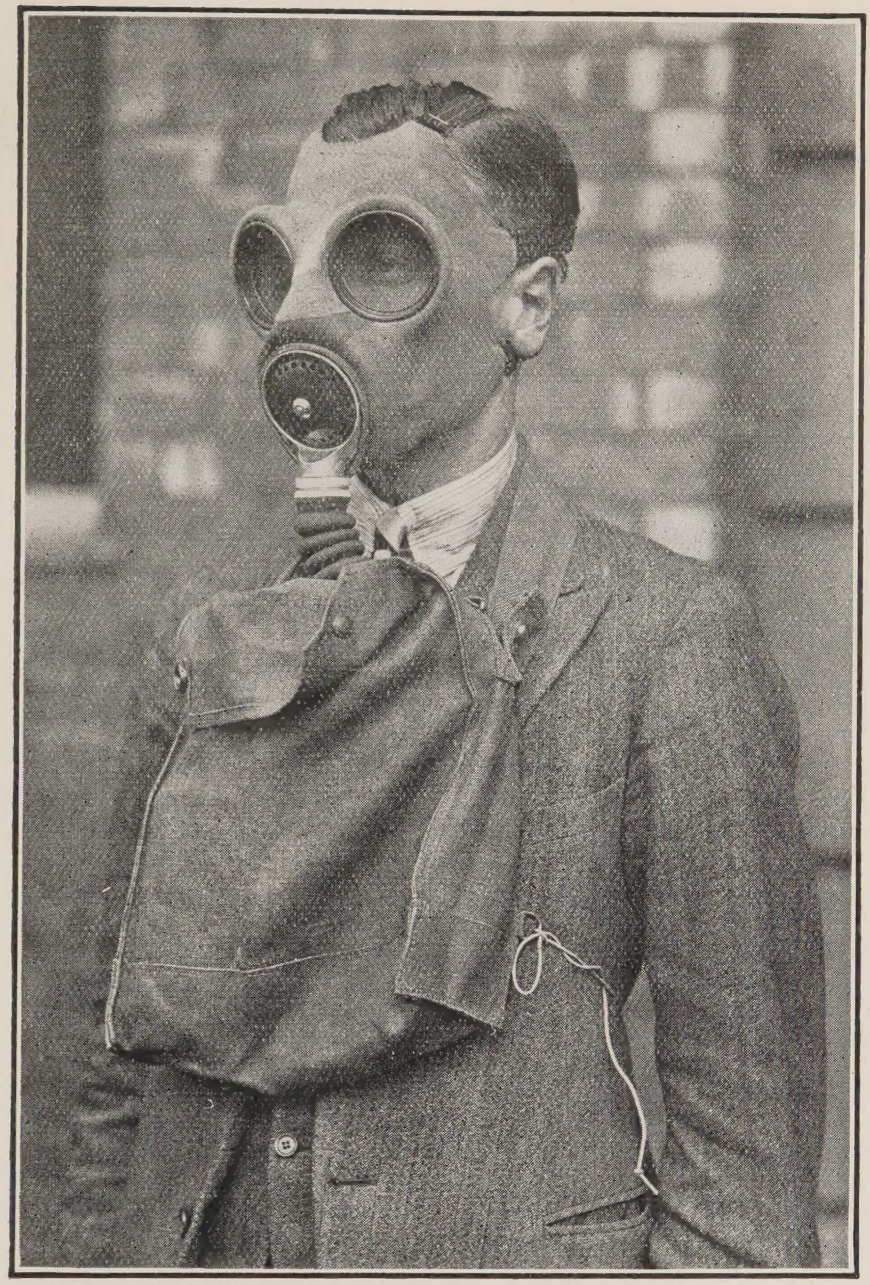
Protects against all known War Gases and Smoke without renewal for a total period of 36 hours even in a heavy gas concentration.

C.F.S. Full-Sight Gas Mask, complete with S.F.A. Grey Filter and Carrying Box, as illustrated.

Price £3/0/0 each

General Service Gas Mask

MARK IV.



The Facepiece is of the latest British Army pattern, giving perfect protection with a high degree of comfort. Vision and speech are excellent. All materials used are the best possible and robustness and durability are guaranteed. Our canisters have been fully tested and satisfy the requirements of the Home Office Factory Department in every particular. Each canister bears a certificate of test.

Protects against all known War Gases. Complete with Haversack and Anti-Dimming Compound.

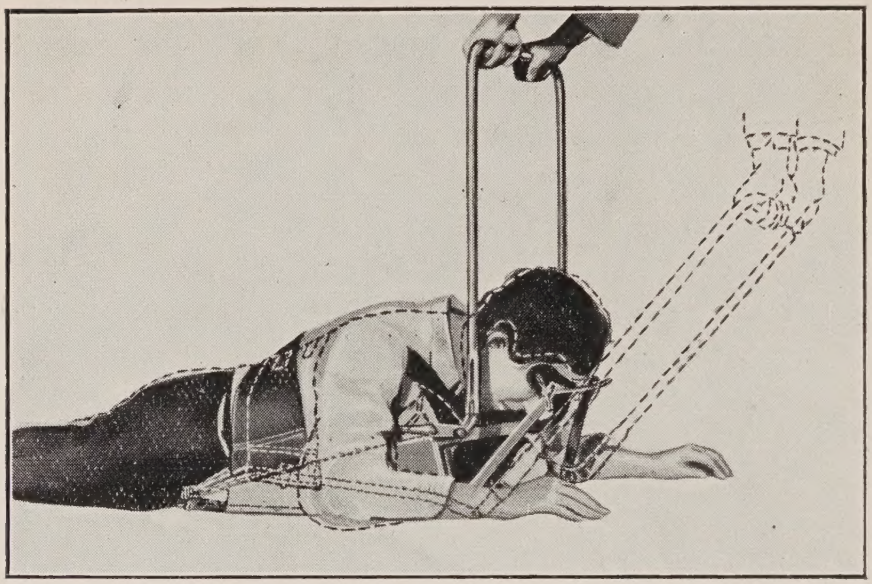
Price ~~£2/15/0~~ £2/10/0 each.

Panis' Resuscitator

For Victims of Asphyxiation from Drowning, Noxious Gases, Electrocution, etc.

RESPIRATORY METHOD OF SHAFER.

British Patent No. 212,254.



This figure shows the patient after INSPIRATION; the dotted lines show his position after EXPIRATION.

"SAVE A LIFE."

Anyone can use it efficaciously and without any possibility of danger to the patient.

It does not require any training.

It does not tire the operator.

It assures an energetic and regular respiration.

The device can be effectively used by a casual life saver, even during the period of excitement following an accident.

The word "CHEST" engraved on the apparatus, the rests provided for the arm pits and forehead plainly indicate the position in which the patient is to be placed and prevent any possible error.

The strap is then attached over the back of the patient without being tight and the pumping motion of the lever is commenced.

The apparatus is so simple that even a casual life saver can make no mistake in its operation and naturally regulates the motion by his own respiration and continues as long as it is necessary, or until a Doctor arrives and then under his direction.

A full descriptive pamphlet may be had on application.

Price complete **£14/14/0**

R.M.C. Protective Oilskin Clothing and Fabrics

BODY PROTECTION.

Most Oilskin Garments afford some protection against vesicant gases, the essential of efficient protection being the continuity of the oilskin film over the whole garment including the seams.

Three distinct types of oilskin garments have been evolved for purposes of body protection where the wearers are liable to be exposed to liquid or to gaseous concentrations of vesicant gases including Mustard Gas and Lewisite. These types are called "Specific," "Service" and "Duplex."

The "Specific" type has been designed primarily from the point of view of gas protection and is to be regarded as an expendable issue, *i.e.*, for use on a few occasions and then destroyed. It cannot be employed for any other than the purpose for which it has been evolved, *i.e.*, for use by combatant and auxiliary forces solely as a protection against gas.

The "Service" type is the Admiralty type of Oilskin, designed for continued wear, for all-weather protection and for resistance to vesicant gases. It can be decontaminated.

The "Duplex" type has been evolved for use by the Essential Civilian and Industrial Services and is similar to the "Service" type.

Most outdoor workers require some form of weather protection, either purchased individually or supplied as a uniform issue. The idea which prompted the design of the "Duplex" type Oilskin has taken cognisance of this and the result is a type of garment which will function equally well as a waterproof or as an adequate form of gas protection.

The "Duplex" type is simpler in construction than the "Service" type and gives better frontal protection and more adequate ventilation. Like the "Service" type it can be decontaminated.

"Duplex" Oilskins are available as single garments or as sets. A coat set consists of Coat, Leggings, Sou'wester or Hood and Gloves, while a jacket set is made up of Jacket, Trousers, Sou'wester or Hood and Gloves.

PROTECTION FOR STORES, ETC.

Oilskin fabrics afford gas protection and are suited for the covering of stores on quays, etc., as airlock curtains and as window and fireplace protection in gas-proof rooms and shelters.

Oilskin Fabrics are supplied in :—

Yellow, 36″ width	**Price 2/3** per yard.
Black, 36″ ,, ...	,, **2/3** ,,

PARGAZFLAM

(Registered Trade Mark)

Protective Clothing against Mustard Gas

(Standard Equipment of Paris County Council).

IDEAL PROTECTION FOR FIRE BRIGADES, A.R.P. WORKERS, ETC.

Made in one piece from head to foot.

Any kind of Gas Mask can be used.

Material fits the figure, is impervious to all gases.

Fingers in gloves.

Designed by French Expert Scientists for the defence of Humanity against War Gases.

This suit can be put on within two minutes.

Price :

Complete with Rubber Shoes and Haversack as illustrated.

£4/5/0 each

If supplied with $\frac{3}{4}$ length Trousers and without Shoes.

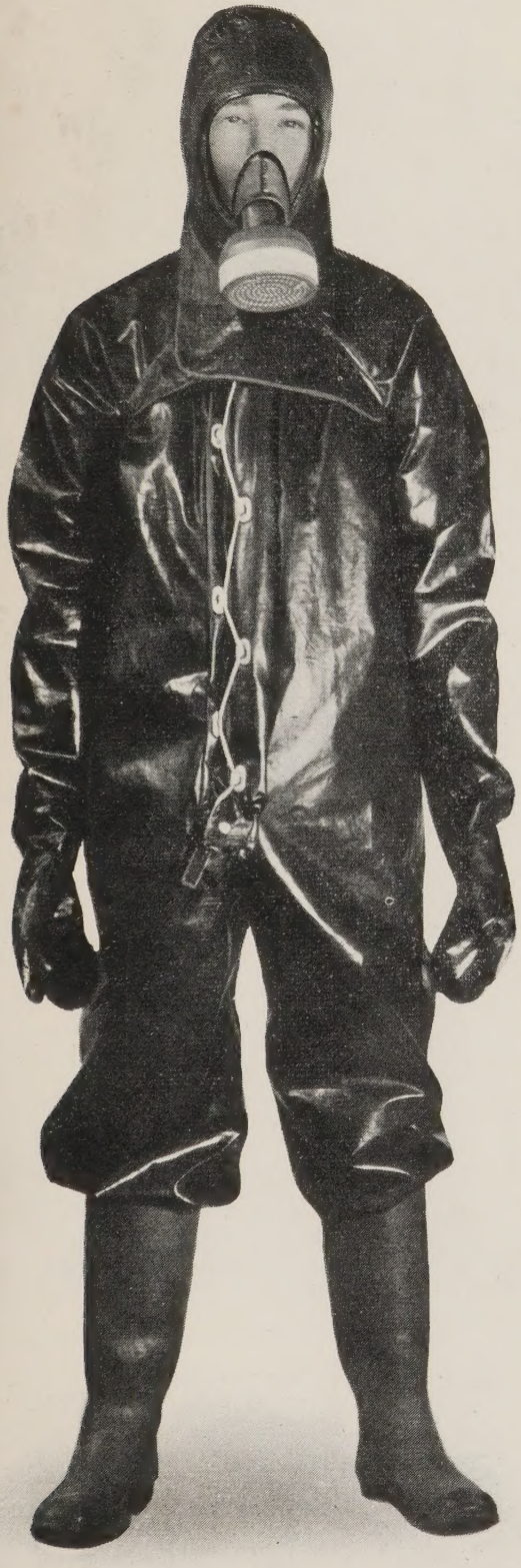
£3/19/6 each

State size required :

Small. Medium. Large.

R.M.C. Oilskin Clothing

(One-piece Suit)
Fitted with Patent Fastening, as illustrated.
Made in Government approved Oilskin material.



1. Step into suit and close inner opening by means of the two special fasteners.
2. Fold next flap from right to left, and close the three outer fasteners.
3. Fold outside flap from left to right, and lace up.
4. Don mask, adjust hood over it, and tie the tapes under arms.

Can be put on within two minutes.

Supplied only with $\frac{3}{4}$ length trousers.

Price £2/2/0

Protective Oilskin Clothing

Government Approved Pattern (Service type) as illustrated.

Price : Complete with
HOOD, TROUSERS,
JACKET, GLOVES.

£1/18/6 per suit.

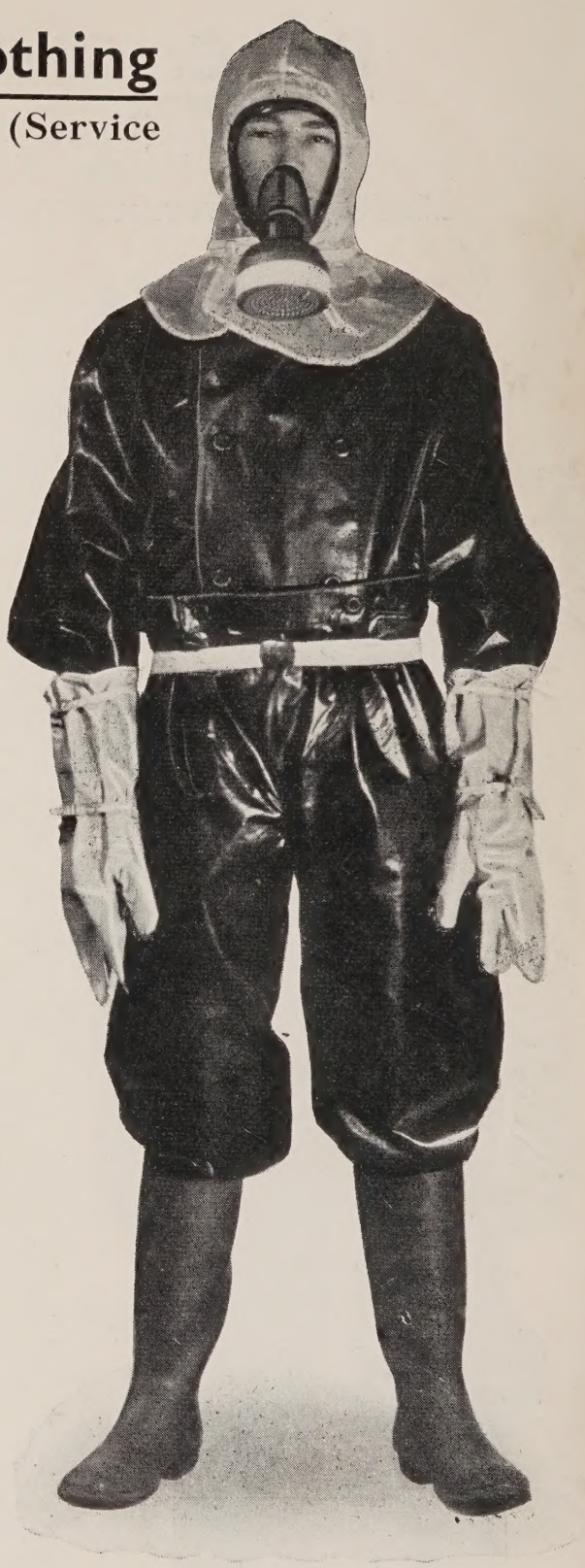
State size required.
Small. Medium. Large.

BEST QUALITY

Rubber Boots

(Wellington Pattern).
State size required.

Ordinary soles	**10/6**	per pair.
Cleated soles	**11/6**	,, ,,



(As supplied to H.M. Government).

Sleeved Aprons ...	**7/3**	each
Wrap Over Coats ...	**15/3**	,,
Jacket, Anti-Gas ...	**11/6**	,,
Trousers, Anti-Gas	**5/9**	,,
Capes, Large ...	**17/-**	,,
Capes, Small ...	**16/9**	,,

Hoods	**3/9**	each
Cap Cover	**2/6**	,,
Gloves	**4/6**	,,
Boots, Heavy ...	**11/9**	,,
Boots, Light ...	**8/6**	,,

The Cromwell Protective Helmet

Patent No. 429732.

(*Made of stout vulcanised fibre*).

Flameproof enamelled, and will stand high impact resistance.

Detachable internal fittings, specially treated to stand Government decontamination tests.

Rubber chin straps, detachable, and fitted with studs for adjustment.

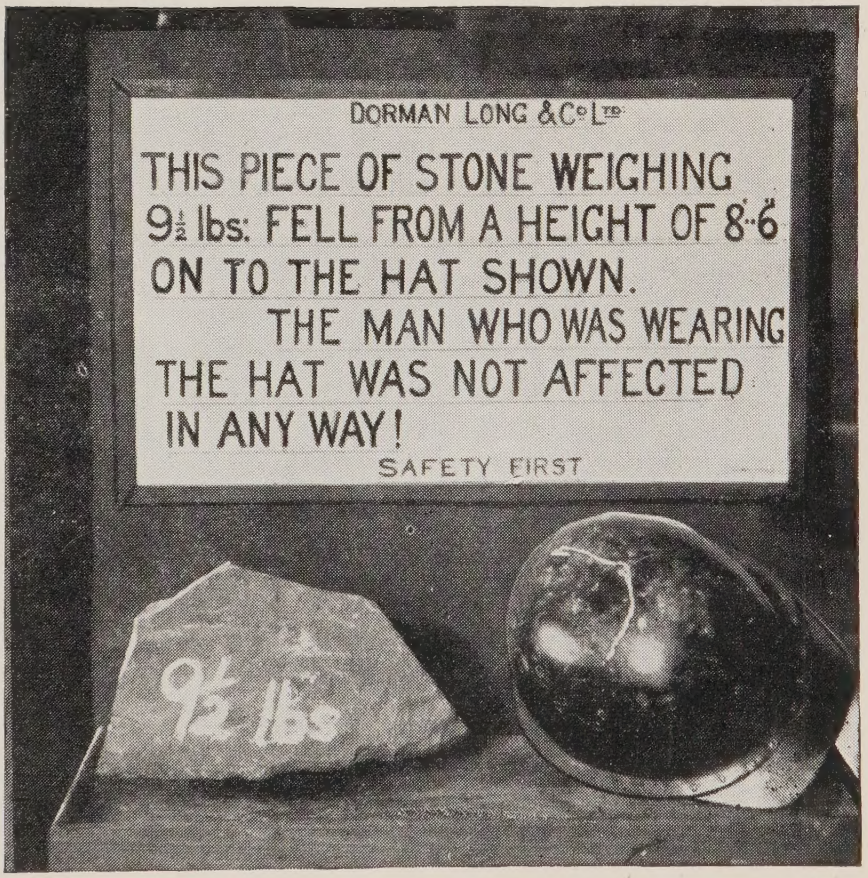
Weight of Helmet complete—18 ozs.

When ordering state size required.

Price 12/6 each.

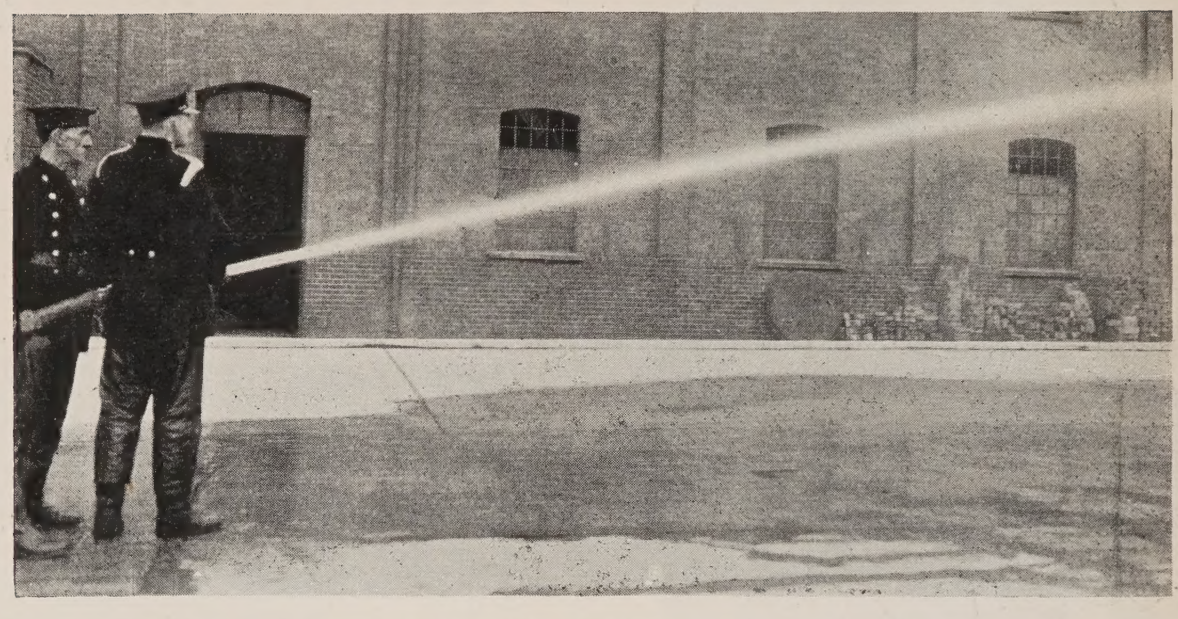
also in steel 15/-

These Hats are specially constructed to meet the following impact tests applied to the American Hard or Safety Hats. "When mounted on a wood block, similar to the position on a man's head, it shall withstand a pressure blow from an 8 lb. iron ball (approximately 4″ in diameter) dropped vertically on to the centre of the crown from a height of 5′ without denting or breaking sufficiently to touch the wood block. The web cradle shall withstand the impact from this same blow without breaking or forcing hat or cap down on to head.


DORMAN LONG & Co LTD
THIS PIECE OF STONE WEIGHING
9½ lbs: FELL FROM A HEIGHT OF 8·6
ON TO THE HAT SHOWN.
THE MAN WHO WAS WEARING
THE HAT WAS NOT AFFECTED
IN ANY WAY!
SAFETY FIRST
9½ lbs

The Pouderoux Diffuser

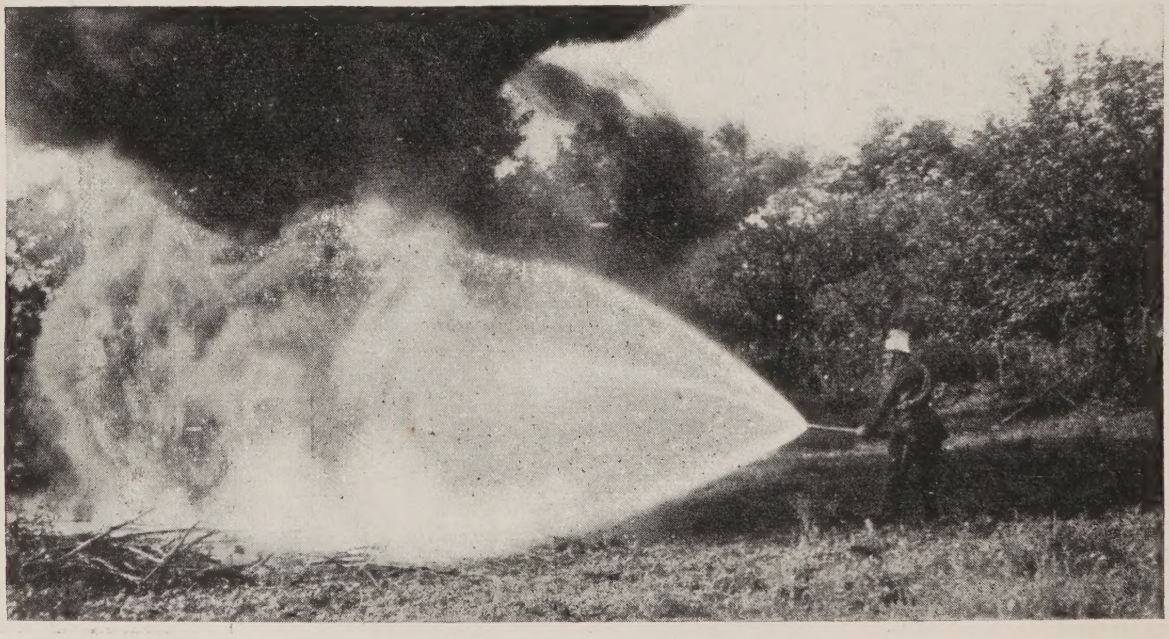
For use with Ordinary Branch Pipes



Do not confuse it with ordinary Spray Nozzles.

The POUDEROUX principle is that the water is whirled centrifugally under pressure, and broken down into a fine uniform vapour—the all important factor in effectively extinguishing Oil Fires—also recommended for decontamination purposes.

Fitted with a complete shut-off, and hand-controlled by the mere operation of a collar, set flush, the Pouderoux Diffuser provides direct jets, and the finest of water mists. There is no need for the branchman to stop to change nozzles, or to shut off the pump, or the hydrant. The Pouderoux gives him what he wants—water mist to drive back smoke, reduce heat, and to smother the fire with the minimum of damage, or, if needed, a good fire-fighting jet. Ideal for oil, bush, and forest fires, and for cooling down carboys containing acids, and cylinders charged with gases, under pressure. It is the only medium by which high tension electrical cable fires can be fought with water without risk to the fireman.



Diffuser	**Price**	**£2/2/0** each.
If supplied with 2½″ Branch Pipe	,,	**£2/12/6** ,,

ROBERTS, McLEAN & CO. LTD. 4, LLOYDS AVENUE, LONDON, E.C.3.
(INC. IN INDIA).

Air Raid Precaution

ASBESTOS FIRE BLANKETS.

Asbestos Fire Blankets are extremely useful in dealing with fires caused by Incendiary Bombs.

They are made from strongly woven asbestos cloth, a very suitable product for this purpose, being entirely free from cotton or other vegetable fibre.

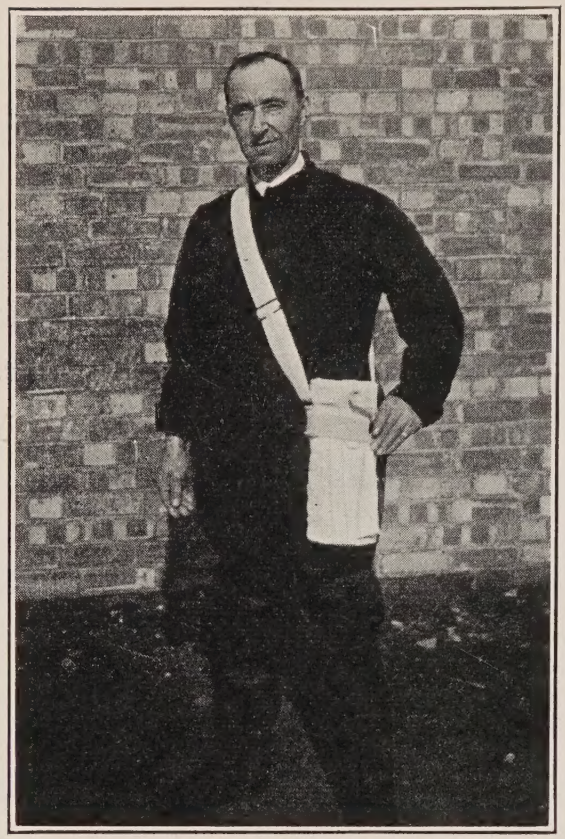
They are supplied in cylindrical containers fitted with a special quick-release device as shown in the illustration.

Made in two sizes.

	Best quality.		
6′×6′	Complete in Steel Container ...	**Price**	**30/-** each.
4′×4′	,, ,, ,, ...	,,	**25/-** ,,
	Second quality.		
6′×6′	Complete in Steel Container ...	**Price**	**25/-** each.
4′×4′	,, ,, ,, ...	,,	**20/-** ,,

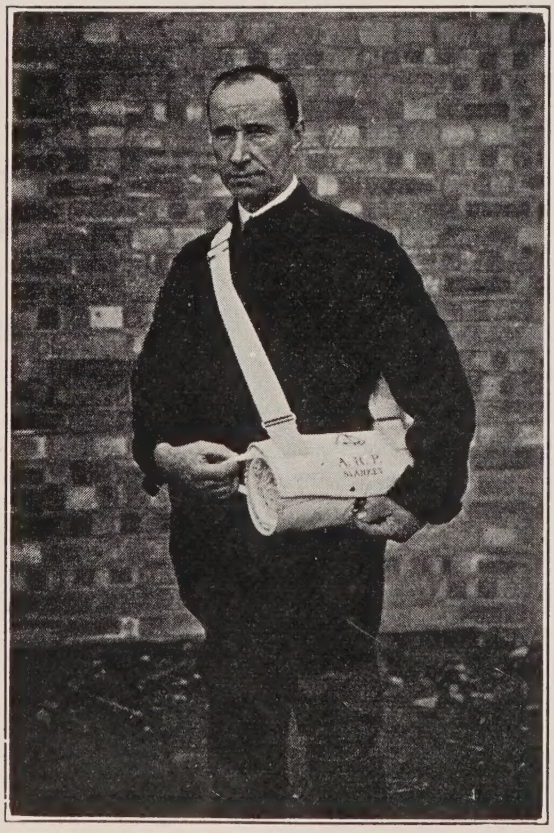
Bell's Asbestos A.R.P. Blanket

4′×4′ **Price 15/-** each. 5′×4 **Price 18/-** each.



BESTOBELL A.R.P. BLANKET.
Complete with quick release Strap Carrier, as illustrated.

4′×4′ **Price 16/-** each. 5′×4′ **Price 19/-** each.



(Reg. Trade Mark.)

BESTOBELL A.R.P. BLANKET.
Complete with quick release Satchel, as illustrated.

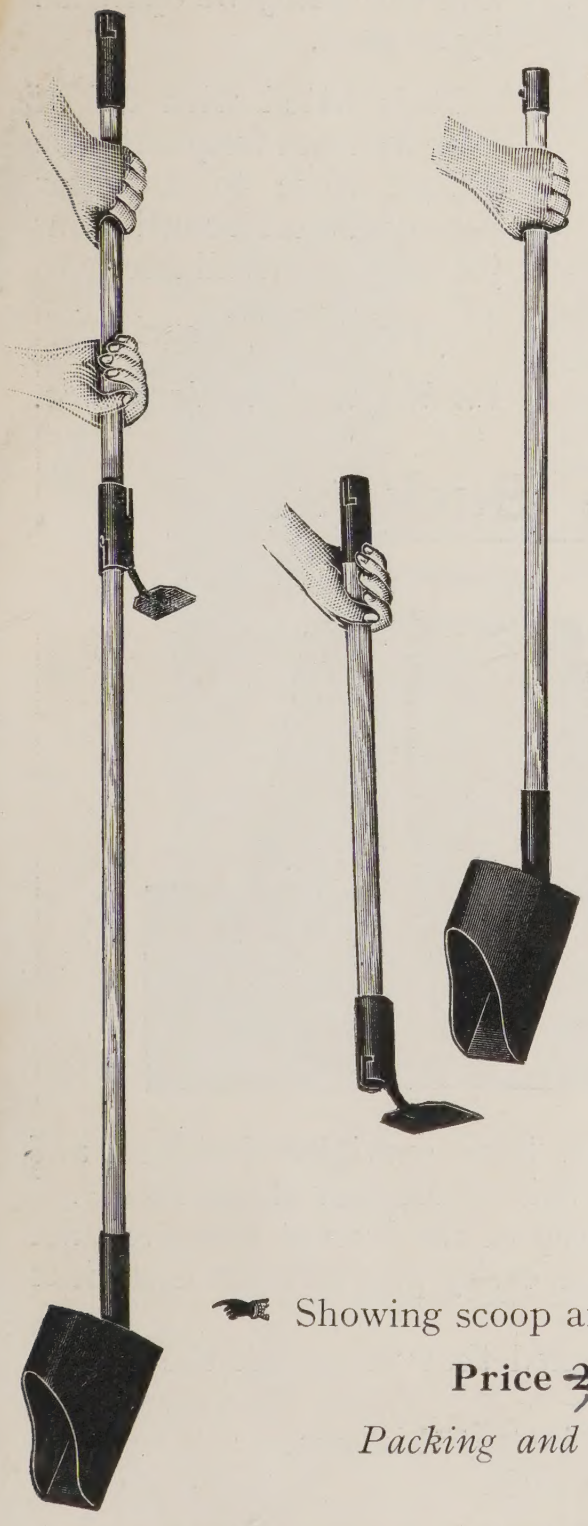
4′×4′ **Price 18/-** each. 5′×4′ **Price 21/-** each.

Fire Fighting Appliances

Fires resulting from Incendiary Bombs must be dealt with immediately. We therefore offer the following appliances :—

REDHILL CONTAINERS.

Showing scoop and rake in operation.



These are to the requirements of the Home Office and hold 32 lbs. of sand. They are supplied complete with scoop, also with rake, scoop and handles as illustrated.

These are bayonet jointed to allow the operator to work at a distance and also permit the rake to be used to gather the bomb into the scoop.

Supplied in Galvanized Iron.

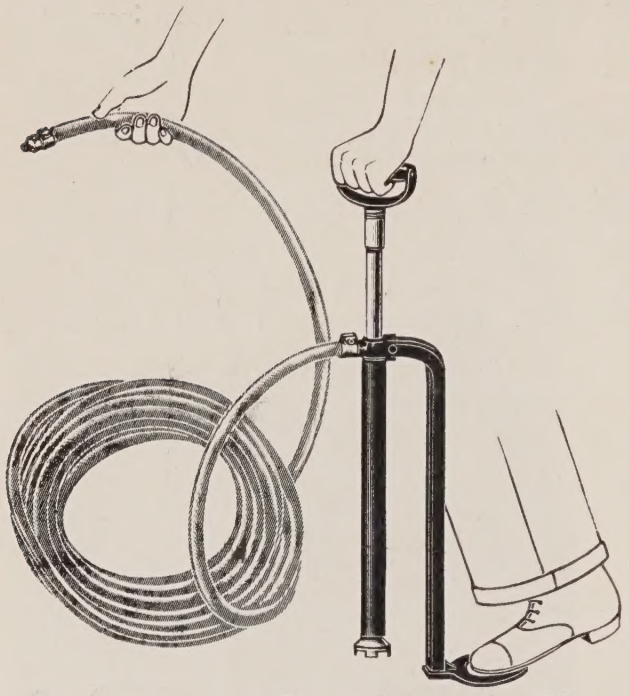
☞ Showing scoop and rake combined.

Price ~~27/6~~ 17/6 each.

Packing and Carriage extra.

Stirrup Pump

This is the Pump recommended by the Home Office for dealing with fires caused by Incendiary Bombs.



It projects a powerful jet a distance of 30′ and will fit in any domestic pail or similar receptacle, and can easily be operated by anyone.

It is fitted with 30′ of hose and can frequently be placed close to a water supply so that a continuous jet may be available.

Price 22/6 each.

Packing and Carriage extra.

Canvas Fire Buckets

These Collapsible Buckets have been specially designed and made for use with the Bantam and Stirrup Bucket Hand Pump.

They are square in shape, the top of the bucket being smaller in diameter than the bottom, water is easily poured from them into the tank.

The sides and base are so stiffened that when full the bucket will stand firmly on its base.

When out of use fold flat as illustrated above.

Price 7/6 each.

SAFETY FIRST!

All British "GEM" Soda-Acid Fire Extinguisher

(Percussion type).

2 gallon capacity.

To operate, withdraw pin and strike hammer against the side.

There is no plunger, and owing to the specially designed expansion chamber the machine cannot weep or corrode, nor can it be set off accidentally.

This type of extinguisher has been standardised by the London County Council, Brighton and Croydon Corporations and many Fire Brigades in all parts of the country.

Price, complete with Special Bracket and one Charge **£2/10/0**

Spare Charges ... ... **4/-** each.

All types of Fire Extinguishers supplied.
Particulars on application.

ROBERTS, McLEAN & CO. LTD. 4, LLOYDS AVENUE, LONDON, E.C.3.
(INC. IN INDIA).

Bantam Bucket Hand Pump

Mark I.

Height overall	28″
Oval Copper Tank	$10\frac{1}{2}″ \times 8″ \times 12″$
Holds $2\frac{1}{2}$ gallons of water.	
Weight, full	...38 lbs.
Weight, empty ...	...13 lbs.

Constructed entirely of Copper and Brass.

Practically indestructible.

Throws a continuous stream of water 30 to 40′ with ease.

Delivers nearly 2 gallons of water per minute.

Highly commended by the Chief Officers of some of the most important Fire Brigades in the country.

No.	Finish.	Price.
3052	Red Cellulose	**85**/- each
3053	Polished Copper	**106**/- ,,

L.F.G. Air Foam Hand Pump

British Patent No. 406541.

which continuously, at your option, throws

AIR FOAM OR WATER

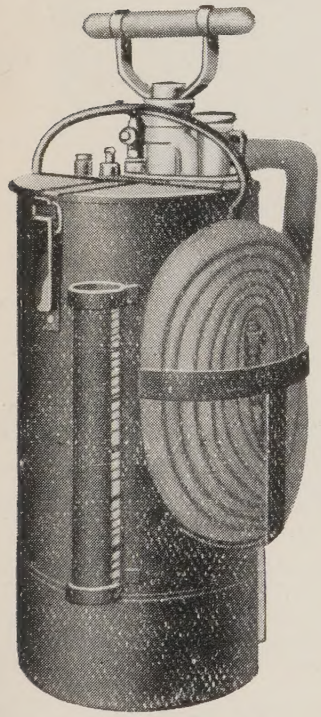
It is always filled, ready for operation, and handy.

The amount of water available can be transformed into 13 times the amount of absolutely harmless extinguishing foam.

AN EXTINGUISHING UNIT

like the LFG Hand Pump is of supreme importance for **Fire Protection** and **Air Raid Protection,** as it can be employed for fighting **fires due to any cause.**

Provisional Air Raid shelters can be sealed gas tight by Air Foam.



THE HARMLESSNESS

of Air Foam has been proved long ago. This mixture of atmospheric air, water, and a small quantity of Foam Extract is **absolutely harmless.** You may spray anything with Air Foam, for instance Machines, Apparatus, Automobiles, Silk Fabrics, Pictures, Furniture and even Foodstuffs without doing the least harm. Air Foam further re-forms after a while without any residue. When Air Foam is used, the much-feared water damage is completely eliminated.

ITS RANGE OF APPLICATION

is practically unlimited. With Air Foam, not only ordinary fires caused by solids like wood, etc., but also fires of inflammable liquids, such as **petrol, oil, tar, varnish, grease, carbide, etc.** that cannot be extinguished by water, can be effectively fought.

THE OUTPUT

of an LFG Air Foam Hand Pump is extraordinary. The smallest size, containing 4½ gallons extinguishing liquid, will supply about 60 gallons of Foam of any consistency which can be regulated at will. The effective range of Foam Stream is about 25 feet. By reversing a cock, either Foam or water may be had. Length of Water Stream about 36 feet.

THE LFG AIR FOAM HAND PUMP

is supplied in one size only :—**4½ gallons capacity.**

Every 4½ gallons of water mixed with **one pint** of Foam Extract will yield up to about 60 gallons of Air Foam. The pump is filled again by a pail without interrupting its operation.

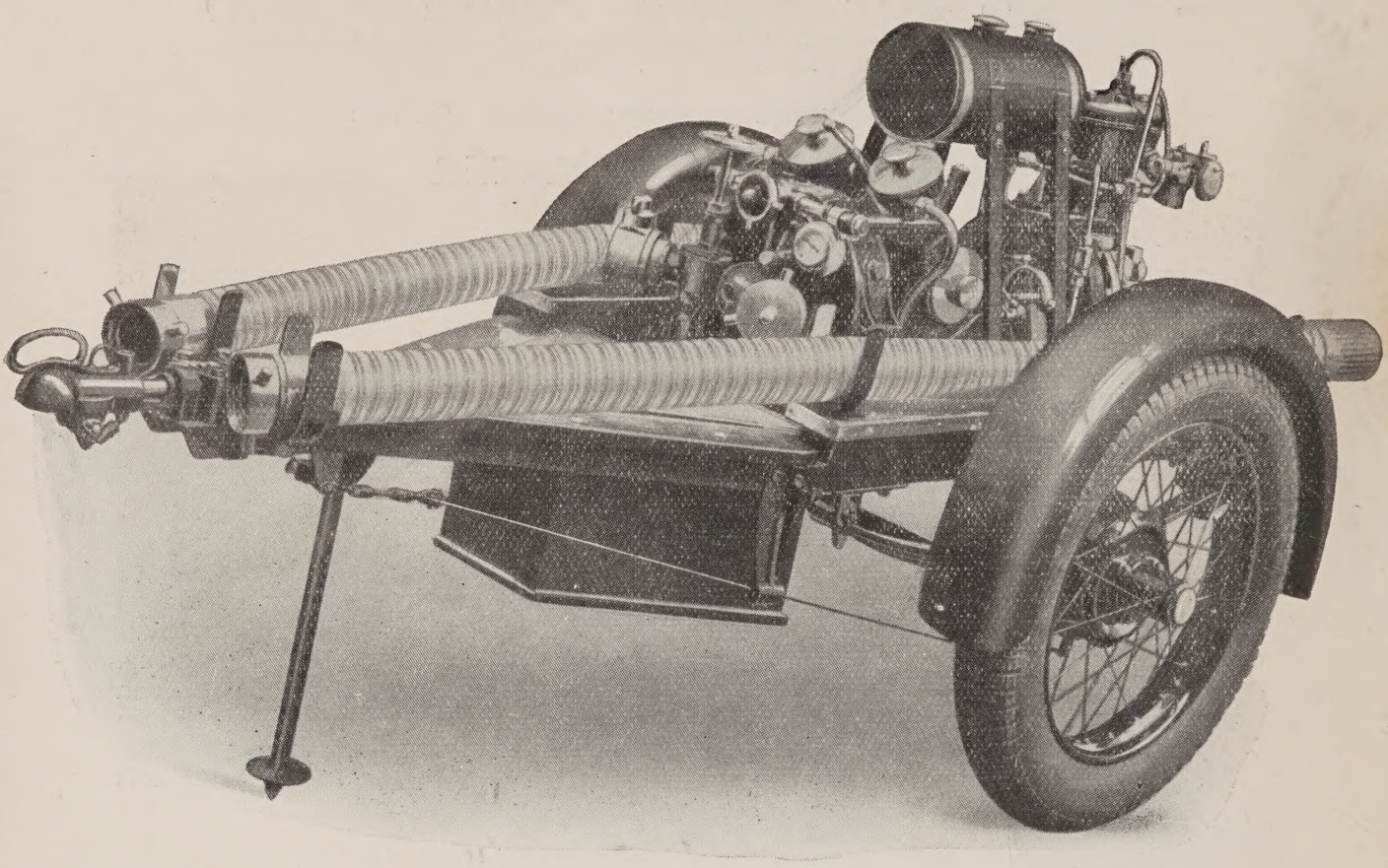
Low Price **Refilling at Low Cost**

Sturdy Construction **Simple Operation**

PRICE

Complete with 15 feet Rubber-lined Hose, Coupling and Nozzle	**£12/12/0**
LFG Foam Extract ... ... (Supplied in 2 gallon containers).	**20/- per gallon**

Dennis No. 1 Trailer Pump (80/130 G.P.M.)



SPECIFICATION.

ENGINE.—Single-cylinder, water-cooled, 4-stroke engine. Totally enclosed side valves with adjustable tappets. Automatic pressure-feed lubrication through sight-feed indicator. Magneto ignition with impulse-starter. Single-lever carburettor with air-strangler for easy starting. Engine is suitably silenced.

TANK.—Cylindrical, containing 3 quarts petrol and 1 quart oil; filler caps clearly marked. Tank carried above pumping set on suitable supports.

FRAME.—Engine, tank and pump securely mounted on light but rigid tubular frame with supporting legs and handles, and clips for wheeled axle.

UNIVERSAL JOINT.—Disc type, coupling engine to pump and arranged for ready dismantling when overhauling.

PUMP.—(Covered by Patent No. 146208). Two-stage high-pressure turbine type, of gunmetal throughout. Suction inlet and delivery outlet on back cover to facilitate coupling up. Output from 130 gallons per minute at 40 lbs. pressure to 70 gallons per minute at 100 lbs. pressure. Pressure-gauge fitted to pump casing. Twin air-pump provided, driven through cone-clutch running in oil.

FILTER.—Fitted between pump and engine water-jacket to prevent admission of foreign bodies.

UNDER-CARRIAGE.—Light but rigid steel frame supported by laminated springs from tubular axle carried on pneumatic-tyred wheels. Automatic over-run brake. Domed wings. Ball-connection for attachment to tractor.

EQUIPMENT.—The following equipment is supplied with each Pumping Set:—Two 6′ 6″ lengths of 2½″ suction hose carried on suitable brackets; copper strainer; suction spanners; screwdriver; shifting spanner; three double-ended spanners; tool box.

Price on application.

"Romaco" Asbestos Clothing

FOR FIRE FIGHTING

Fitted with Patent Vizor and Air Vents.

(Patent Pending).

CHARACTERISTICS.

Made entirely of Asbestos Fabric, and consisting of Jacket, Hood and Gloves in one piece, and trousers with feet coverings in another.

The Hood is fitted with a special patented sight glass which gives the wearer uninterrupted vision.

Although it weighs about 23 lbs. it allows free movement, and the wearer can even carry a load and climb a ladder.

Asbestos being non-rotting and incombustible the clothing resists water and fire, and its life is therefore practically unlimited.

The suit, which protects the wearer perfectly, stores up heat in the fabric. Care must therefore be taken not to remain, at any one time, too long in a fire, but rather to make several incursions so that the calories absorbed by the material are dissipated into the air, instead of penetrating inwards.

Price £17/17/0 complete, nett

Carrying Case extra **£1/10/0**

Hand-operated Syren

(Supplied to H.M. Government).

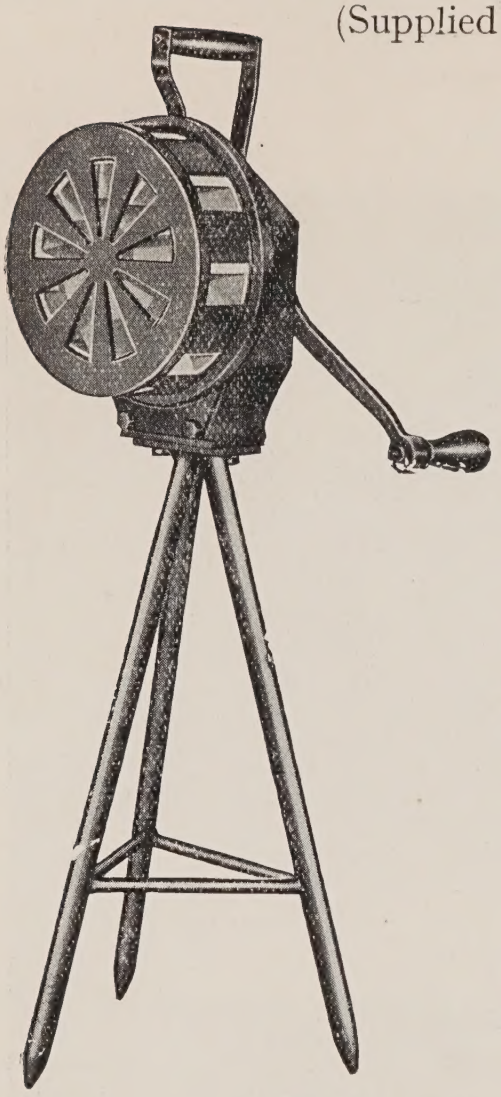


Fig. 10. Type HLS.

Although every engineer will admit the vast superiority of the electric syren over all other forms, it sometimes happens that warnings have to be given in localities or in circumstances where no suitable electric supply is available or in case of failure of electric supply. To meet these conditions the hand-operated instrument illustrated on this page has been introduced.

The outfit comprises a powerful syren, similar in general design to the machines already described, but arranged for manual operation by a crank handle and mounted on a steel tripod.

The syren is driven through high-ratio gearing so that only three revolutions of the handle are required to achieve maximum speed and full power, while the driving effort is reduced to a minimum by the fitting of ball bearings.

The powerful continuous note has a range of approximately a mile and a quarter with the wind, and nearly half a mile against the wind.

Morse or other code signals can be given if desired by manipulating the carrying handle shown at top of illustration.

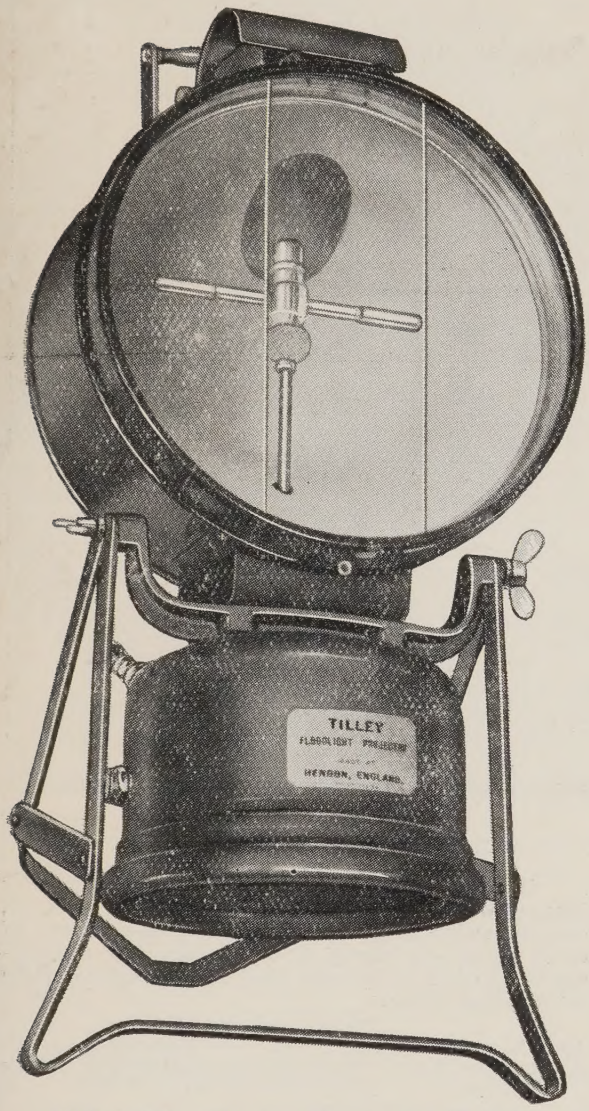
These machines are particularly suitable for use in outlying villages, in schools or camps on large estates, or in isolated or scattered districts where it may be necessary to transport the syren from place to place.

The syrens are light in weight and compact, yet sturdy instruments capable of withstanding rough usage. The total weight is 21 lbs., and the dimensions 30″ high by $9\frac{1}{4}$″ by $9\frac{1}{2}$″.

Type No. HLS. ... ... **Price £12/12/0** nett

Tilley Floodlight Projector

5,000 mean reflected C.P. at a cost of 1d. for eight hours.



Tilley Floodlight Projector F.L.6 mounted on Short Stand S.I.

The Tilley Floodlight Projector is a self-contained and efficient unit, which is very extensively used throughout the world. It depends for its light on ordinary paraffin, and from this fact it gains two important advantages —economy and efficiency. However dark the night or stormy the weather, work can proceed efficiently when illuminated by the 5,000 C.P. beam from this storm-proof Projector. It gives its full steady light continuously for 40 hours on one filling without attention beyond occasional pumping. This works out at the absurdly small cost of 8 hours for 1d. There are no cables or pipes; the Projector is easily carried from place to place, and can be set up to give its steady beam in the most inaccessible positions.

Cheaper, Safer and Cleaner than Acetylene and Naphtha Flares.

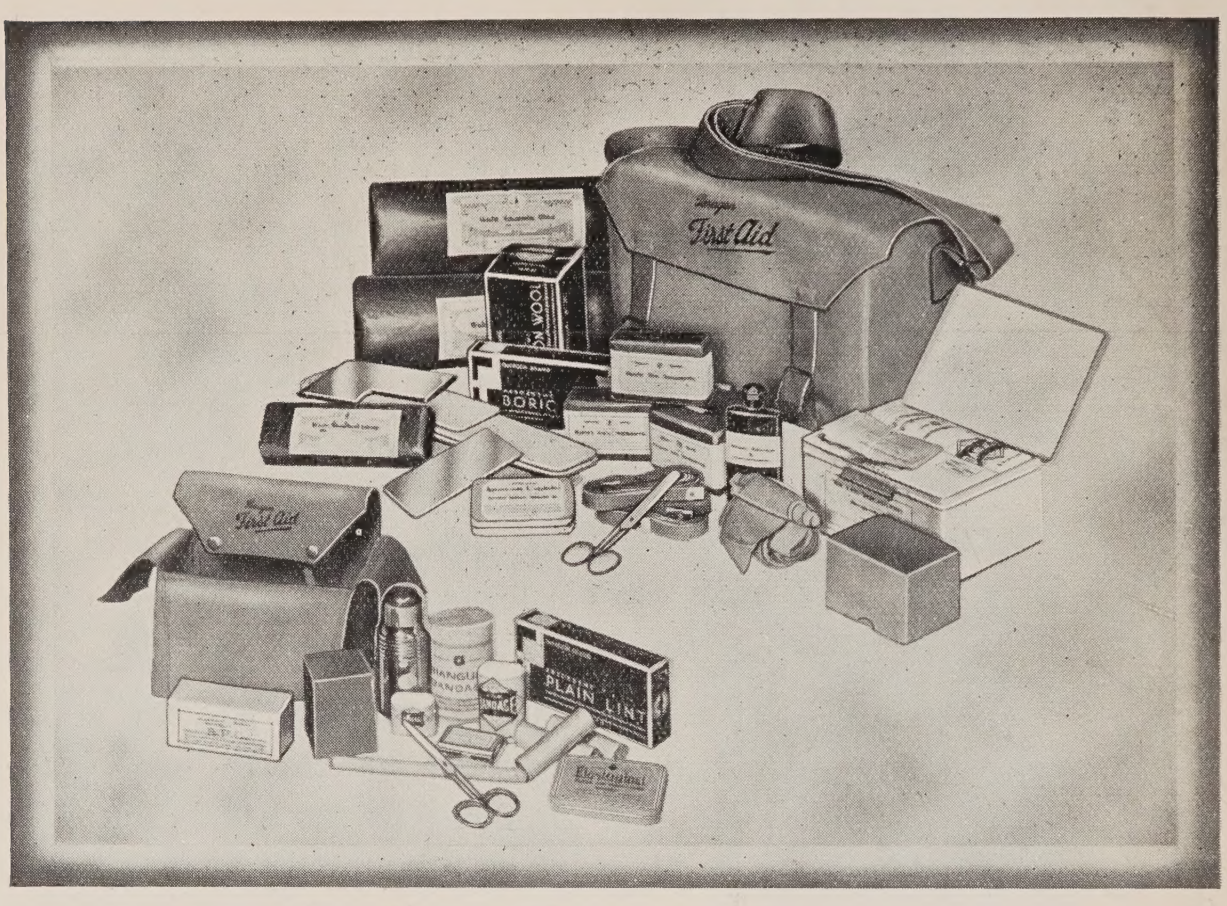
- **Widely used to-day by most of the leading Public Works Contractors; the four main line British Railways; Foreign Railways; Fire Brigades, etc.**
- **Suitable for all constructional work, building operations, break-down work, tunnel inspection and repair, flood-lighting generally, etc.**

Price complete as per illustration

£7/10/0 nett

ROBERTS, McLEAN & CO. LTD. 4, LLOYDS AVENUE, LONDON, E.C.3.
(INC. IN INDIA).

Paragon Brand Air Raid Precautions
FIRST AID OUTFITS



FIRST AID POUCH.

This Pouch and Contents conform to the recommendations of the Hone Office Booklet "Air Raid Precautions Memorandum No. 1," and is of the type to be carried by each man in the First Aid Party. It is about $6\frac{1}{2}'' \times 4'' \times 4\frac{1}{2}''$, and can be carried on the belt.

CONTENTS:

1 Triangular Bandage, unbleached calico, B.P.C., $38'' \times 54''$, wrapped.

1 White Open Wove Bandage, B.P.C., $1'' \times 3$ yds., wrapped.

1 White Open Wove Bandage, B.P.C., $2'' \times 4$ yds., wrapped.

1-$\frac{1}{2}$ oz. Plain Lint, B.P.C., wrapped and cartoned.

1-$\frac{1}{2}$ oz. Absorbent Cotton Wool, B.P.C., interleaved, wrapped and cartoned.

1 Pair Surgical Scissors, 5".

Safety Pins, nickel-plated on brass, in metal container, size 3.

3-30 minim Ampoules, 2 per cent. Alcoholic Solution of Iodine, in card containers.

1-2 oz. Stoppered Bottle of Sal Volatile, in metal case.

1-2 oz. Graduated Medicine Tumbler, in strong container.

1 Piece strong Cane, 6" long.

1 Tin Elastoplast Dressings, assorted sizes, for minor injuries.

SURGICAL HAVERSACK.

This conforms with the suggestion in the Home Office Booklet for the surgical haversack, one of which is to be part of the equipment of each First Aid Party of four men. Its dimensions are $12\frac{1}{2}'' \times 7\frac{1}{2}'' \times 7''$, and it is provided with a webbing sling.

CONTENTS:

1Set Wooden Splints, with 3 metal pockets.
3 Cotton Webbing Straps for securing Splints to the limb.
1 lb. Cotton Wool, B.P.C.
2 Triangular Bandages, unbleached calico, B.P.C., $38'' \times 54''$, wrapped singly.
3 Elastoplast Finger Dressings, wrapped singly.
3 Elastoplast Dressings, $2\frac{1}{2}'' \times \frac{3}{4}''$, for small wounds, wrapped singly.
3 Elastoplast Dressings, $1\frac{1}{2}'' \times \frac{3}{4}''$, for small wounds, wrapped singly.
1 Roll (3 yds.) of Gauze, B.P.C.
4 Large Sterilized First Aid Dressings.
4 White Open Wove Bandages, B.P.C., $1'' \times 3$ yds., wrapped singly.
3 White Open Wove Bandages, B.P.C., $2'' \times 4$ yds., wrapped singly.
3 White Open Wove Bandages, B.P.C., $3'' \times 4$ yds., wrapped singly.
1 Spool Adhesive Plaster, Zinc Oxide, B.P.C., $\frac{1}{2}'' \times 2\frac{1}{2}$ yds.
12 Safety Pins, nickel-plated on brass, size 3, in container.
1-2 oz. Absorbent Cotton Wool, B.P.C., interleaved, wrapped and cartoned.
1-1 oz. Boric Lint, B.P.C., wrapped and cartoned.
1 Pair Surgical Scissors, 5".
1 oz. 2 per cent. Alcoholic Solution of Iodine, in capillary bottle.
1-2 oz. Graduated Medicine Tumbler, in strong container.
1 Tourniquet, St. John's.
6 Ampoules Aromatic Ammonia, in container.

10/6 each, nett (~~Sent on approval~~). **25/0 each, nett**

ROBERTS, McLEAN & CO. LTD. 4, LLOYDS AVENUE, LONDON, E.C.3.
(INC. IN INDIA).

"Clarophan" Luminous Paint & Panels

LUMINOUS PAINT—"CLAROPHAN."

For use in Shelters, etc. This paint absorbs normal day or artificial light, and discharges it the moment such light is extinguished, and continues to retain luminosity for a period of about 8 hours. This paint will regain its original power on re-exposure to light and has an indefinite period of life, but it can only be recommended for use indoors. For use out of doors, a "CLAROPHAN" Luminous Enamel can be supplied which, of course, withstands all atmospheric conditions.

LUMINOUS PANELS—"CLAROPHAN."

These panels consist of thin aluminium sheets upon which "CLAROPHAN" LUMINOUS PAINT has been sprayed, and are thus ready for immediate use and can be moved from place to place as occasion demands. They are especially useful in all gas-proof rooms, basements, etc., as during emergencies they would prevent panic in cases where for any reason the light might fail. As above stated, these panels will glow for at least 8 hours and although they will, during such a period, lose their luminosity to a large extent, this loss would not be detected as the human eyes become used to the surrounding darkness and become light sensitive.

LUMINOUS STRIPS—"CLAROPHAN."

These STRIPS bearing Black arrows or plain are similar in construction to the panels and are invaluable in passages, staircases, etc., as direction signs, and as aids to avoid risk of accidents from obstructions, etc.

PRICES AND SPECIFICATIONS.

"Clarophan" Luminous Paint (ready to use) ...	...	**22/6**	per lb. tin.			
"Clarophan" Luminous Panels. Size 3′ 3″ × 1′ 8″						
Framed	...	**Price**	**£2**	**5**	**0**	each
Unframed	...	,,	**£2**	**0**	**0**	,,
"Clarophan" Luminous Strips. Size 20″ × 1¼″	...	,,		**1**	**9**	,,

"Celastoid" for Air Raid Precautions

The use of Celastoid for rendering the windows of existing rooms or specially built shelters blast and splinter-proof, cannot be too highly recommended.

It is non-inflammable and can be used in normal times as a substitute for ordinary glass.

Celastoid has been used in the first new building to include an Air Raid Precautions Sector. The Architect designed the Staff Recreation Room in the New Town Hall, Stoke Newington, to be so constructed that the occupants of the building will be safe during air raids. All the windows and doors facing outwards are glazed with

"CELASTOID" 3 mm. (⅛ inch) Transparent Sheeting.

When properly fixed into metal and wooden window frames, its strength is enormous and its resistance to suction or blast cannot be equalled by any other type of glass substitute.

To render windows gas-proof it is only necessary to bed the edges of the sheet into rubber, "Bostic," or other approved non-perishing plastic seating.

Made in sheets of various sizes and thicknesses.

Send us your requirements. Prices on application.

" Sealophane"

" SEALOPHANE "—The Transparent Self-Adhesive Tape for rendering Glass Shatter-Proof.

" SEALOPHANE."—In cases of air raids the penetration of gas is not the only factor to be guarded against. The danger of flying glass due to windows being " blown in " by repercussion must be reduced to a minimum. The usual method is to cover the window panes with paper. This is effective but darkens the rooms. A much more suitable method is to apply strips of " SEALOPHANE " on the glass so that the windows are completely covered. The individual strips of " SEALOPHANE " should slightly overlap. Such precautionary measures have been found most effective by the authorities concerned. " SEALOPHANE " is a superior product due to its efficiency and transparency. All that is required to secure firm adhesion to any clean, dry surface is slight pressure, no heat or other previous preparation of either the " SEALOPHANE " or the surface to which it is to be applied are necessary.

PRICE PER ROLL OF 20 YARDS.

½" wide	**1/9**	per roll
1" ,,	**3/6**	,,
2" ,,	**7/0**	,,
3" ,,	**10/6**	,,
4" ,,	**14/0**	,,

"Sealoband "

" SEALOBAND—For Gas-Proof Sealing.

" SEALOBAND " is a self-adhesive tape with a cloth basis. It is just as easy to apply as " SEALOPHANE," and although it is not transparent it has a much greater tensile strength than " SEALOPHANE." " SEALOBAND " forms an admirable medium for sealing cracks and crevices in walls or ceilings, or around doors, window frames, etc. It is also an ideal sealing medium for rendering all types of containers such as those used for foodstuffs, etc., gas-proof. " SEALOBAND" excludes effectively air, light, dust and moisture. It is practically odourless, and it is easy to remove. " SEALOBAND " is unaffected by moisture as well as by poison gases. It is the perfect seal for the gas-proof chamber for demonstration purposes.

PRICE PER ROLL OF 20 YARDS.

1" wide	**1/9**	per roll
2" ,,	**3/6**	,,
3" ,,	**5/4**	,,
4" ,,	**7/0**	,,

Sand Bags

Government Specification

Size 14"×33" ... ... **27/6** per 100 nett ex-Works.

Special prices for larger quantities.

Air Lock Blankets

(As supplied to H.M. Government).

54" wide ... ... **6/6** per yard

Special prices for large quantities.

USERS OF OUR AIR RAID PRECAUTIONS INSTRUCTIONAL APPLIANCES.

H.M. GOVERNMENT DEPARTMENTS.

Air Ministry.
Board of Education.
British Museum.
Colonial Office.
Crown Agents for the Colonies.
Commissioners of Inland Revenue.
Foreign Office.
Falfield Anti-Gas School.
General Post Office.
H.M. Office of Works.
Ministry of Agriculture.
Ministry of Health.
Ministry of Labour.
Ministry of Pensions.
National Physical Laboratory.
Ordnance Survey Office, Southampton.

COLONIAL & OVERSEAS DEPARTMENTS.

Irish Free State Government (Defence Department).
Public Works Department, Singapore.
Director of Public Works, Hong Kong.
Chief Medical Officer, Mauritius (Health Department).
Colonial Secretary, Suva, Fiji.
Medical Laboratory, Dar-es-Salaam, Tanganyika.

FIRE BRIGADES.

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Aberdeen.
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Bexhill.
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East Barnet.
Friern Barnet.
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Fleet.
Guildford.
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Bolton.
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Blackpool.
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Edinburgh
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Erith.
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Workington.
Woking.
Worthing.
Newark-on-Trent.
Preston.
Plymouth.
Rickmansworth.
Rochdale.
Ramsgate.
Southampton Docks.
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Uxbridge.
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Richmond. &c.

BANKS.

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Westminster Bank (Head Office).
Bank of England, &c.

GAS & ELECTRIC LIGHT COMPANIES, &c.

Brighton, Hove & Worthing Gas Co.
Central Electricity Board.
Hampton Court Gas Co.
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City of Edinburgh (Public Health Dept.)
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Deal Borough.
East Grinstead Urban District Council.
Exeter County Council.
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Grimsby Corporation.
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Harrow Urban District Council.
Hants County Council.
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Nottingham City Corporation.
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East Sussex County Council.
Erith Urban District Council.
Farnham Council.
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Guildford Borough Council.
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Holborn Borough.
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Kensington Borough.
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Middlesbrough Corporation.
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Tear and Other Gases (Without Tears)

Tear Gases—first comes C.A.P.,
Then K.S.K. and B.B.C.
If you smell pear drops, then beware,
For K.S.K. in in the air.
These gases, too, affect the mind,
Explain they are not really blind.
Remove and reassure you " oughter " ;
Wash out the eyes with saline water.

CHOKING GASES.

Phosgene and Chlorine, are, alas ;
Chlorpicric, too, a deadly gas.
Affects the lungs, affects the breath,
And very soon may lead to death.
The only hope is perfect rest ;
Remember this, and do your best.
Pop on a mask, and quickly fetch her
Without the least delay a stretcher.
Don't let her move ; give her beef tea,
Keep her as warm as she can be.
Don't give her alcoholic drinks ;
Persuade her to have forty winks ;
And *don't*, in spite of great temptation,
Try artificial respiration.

NOSE GASES.

D.A., D.M.—also D.C.,
You cannot smell, you cannot see ;
This makes it harder still to tell
There's arsenic in them as well.
It makes one snuff, and sneeze and blow,
It makes one very sad and low.
Non-permanent, so won't endure ;
Pop on a mask, and re-assure.
Make several jokes and remove quick ;
Don't be surprised if they are sick.

MUSTARD GAS.

When you have heard the warning sound
That Mustard Gas is on the ground,
Put on the mask that you possess ;
All helpers have protective dress.
Remember, 'tis persistent gas ;
Will last for weeks on road and grass.
The smallest splash upon your hand
Will quickly to a sore expand.
If on a person there's a trace,
Rush him to the appointed place ;
Take off his boots and clothes and suit,
And scrub him well from head to foot.
Then in another room he'll find
Fresh clothes and boots, assistance kind.

Charts for Lectures

A.—**Cleansing Station** (Size $22\frac{1}{2}'' \times 35''$).

B.—**Going on Duty** (Size $30'' \times 40''$).

42/- per dozen copies printed black ink on paper.

5/6 each, single copy on paper.

10/6 each, printed black ink **on linen** with rollers attached.

15/- each, printed black ink and **hand coloured on linen** with rollers attached.

Charts for Personnel & Householders

C.—**How to Gas Proof a Room** ($12'' \times 20''$).

This has proved to be very popular and many thousands of copies have been purchased by Local Authorities for distribution to Air Raid Wardens, etc.

3d. each	...	**3/- per dozen**
£1 1 0	...	per 100
£2 7 0	...	,, 250
£4 4 0	...	,, 500
£7 7 0	...	,, 1,000

D.—**Small reproductions of "Cleansing Station" and "Going on Duty."**

In response to many requests we have produced these charts in miniature form for the use of A.R.P. personnel. Both charts are printed on the one sheet. The prices quoted below are for sheets **containing both charts.**

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price as C

E.—**Lantern Slides.**

We can supply lantern slides of each of the above charts A, B and C at a cost of **5/-** each.

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Haversack ... ... **2/6** each extra

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